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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 251,172	02 17 1999	AMMAR DERRAA	MI30-034	2938

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EXAMINER

RAMSEY, KENNETH J

ART UNIT PAPER NUMBER

2879

DATE MAILED: 12 17 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/251,172

Applicant(s)

DERRAA, AMMAR

Examiner

Kenneth J. Ramsey

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-27, 32 and 41-47 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-27, 32 and 41-47 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: _____

Amendment

1. The amendment filed November 15, 2002 has been entered.

Prior Art Rejections

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-27, 32, and 41-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (5,872,019) in view of Harrison et al and Benjamin et al. Lee et al '019 discloses a process for forming a base plate for a field emission display comprising providing a substrate configurable into a monolithic base plate for a field emission display. Lee et al differs from claims 15-17 in that the claimed invention requires the partitioning of each separately addressable region of pixels into plural rows and columns of pixels and plural independent drivers for each region. Lee et al differs from claims 18 - 23 and 32 and 41-47 in that the claimed invention requires the forming of at least one row or column address line with a length or width that address less than all of the pixels in that row or column and by the partitioning of a matrix of pixels into sub-matrices of pixels. Lee et al '019 also differs from claims 24-27, 32 and 41-47 in that those claims require the steps of providing a face with surrounding areas of luminescent material in operable proximity with the substrate. Harrison et al and Benjamin et al each teach dividing a matrix of pixel electrodes into 4 sub-matrices of plural rows or columns which are independently addressable in order to overcome a

previous limit as to the size of the display. In Hodson et al the size limitation was due to technology re either of refresh rates or the inability to provide a monolithic display plate with an area larger than a 10 inch diagonal. Hodson et al discloses tiling 4 or more emitter base plates, independently addressable, onto a monolithic plate to provide a display larger in area than a 10 inch diagonal. However, for video applications which require a fast display refresh rate, Benjamin et al, col 10, lines 10-22, teaches that a monolithic plate 3 having an array of pixel electrodes 4 and plural driving circuit chips 9 requires subdividing the matrix into sub-matrices such that the row or column lines are no more than 15 cm (about 6 inch) long. In view of the teaching of Hodson et al of providing independent means to address 4 sub-divisions of the emitters to increase the refresh rate is clearly applicable to Lee et al, since their devices also have utility in video and other applications requiring a refresh rate than previously possible with monolithic displays of appreciable size. In view of the use of the monolithic display of Lee et al '019 in video applications, it would have been obvious to one of ordinary skill in the art to subdivide the matrix of rows and columns into 4 matrices of independently addressable rows and columns as taught by Hodson in order to provide a quick refresh rate since as shown by Benjamin et al, it is known to provide independent display regions in a monolithic panel to increase the refresh rate as claimed clearly existed at the time of applicants invention.

4. Claims 11-27, 32 and 41-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (5,872,019) in view of Hodson et al and Benjamin et al as applied to claim 1, further in view of Lee et al (6,320,000). It would have been obvious

to one of ordinary skill in the art to provide electrical isolation between the 4 sub-regions of independently addressable top and bottom, right and left sides of pixel rows or columns by etching to divide a electrically connected region into two electrically isolated regions as taught by Lee et al '221, column 2, lines 60-62.

Response to Applicant's Arguments

5. Applicant's argument that Benjamin does not teach a "monolithic display" may be literally correct; however, the claims require only a monolithic base-plate of a display in which cathodes or emitters are provided. The monolithic plate 3 of Benjamin et al is clearly the baseplate of a display since the pixel electrodes P are provided thereon. The driver chips 9 are not a part of the baseplate. See applicants' original claim 9. Moreover, the issue is not whether or not the plate 3 is a baseplate but whether or not the teaching of Benjamin of dividing the monolithic plate 3 into plural regions independently addressed by plural driver means to solve the problem of a poor refresh rate in video applications would have made it obvious for one of ordinary skill in the art to divide the monolithic baseplate of Lee et al '019 into like regions to enable a fast refresh rate for video and other applications that require a faster refresh rate than otherwise possible on a monolithic display of the same size.

6. Applicant again alleges that the modification proposed by the examiner is contrary to the teaching of and would destroy the prior art unsatisfactory for its intended purpose. As noted in the last Office action, most of the applicant's arguments have been addressed by reconfiguring the original rejection using Lee et al '019 as the primary reference. The examiner respectfully points out that Lee et al '019, not Hodson

et al, is the prior art being modified. There is no question but that the modification of Lee et al as proposed would enhance not render their device unsatisfactory for its intended purpose since the modification would increase the refresh rates without destroying the other functionality of Lee. As to applicants argument that Hodson et al teaches that his invention allows the manufacture of larger area displays than possible with monolithic displays, such fact is immaterial as to the issue of whether or not it would have been desirable to increase the refresh rate of Lee et al '019 in order to allow a larger size for an application to video and other applications with a fast refresh rate.

7. Applicant also argues that the Lee et al '019 and '221 patents are void of the words "address" and "monolithic". This argument has no merit. As stated by the examiner in the last Office action, the details of manufacture of the claimed display (other than the step of providing plural independent driver means) as recited in the claims were well known at the time of applicant's invention. Thus Lee et al does form the emitters from the material of the monolithic substrate by removing a portion thereof and does provide isolation between different regions of emitters. Although Lee et al '019 fails to explicitly state that the different regions are separately addressable or that a monolithic base-plate is used, that is clearly the case. See column 7, lines 42-51.

8. As to the further argument Lee et al references cannot possibly suggest or motivate the division of the monolithic emitter substrate into plural regions of rows and column of emitters that are independently address by separate driver means because they do not contain the words "address", whether a single reference discloses or suggests the claimed invention is not the criteria for obviousness.

9. As to the argument that Hodson et al and Benjamin each teach away from features of the claimed invention and thus can not be used to modify the Lee et al references, the applicants have provided no case law to support such an argument. On the contrary the courts have long held it proper to consider one of ordinary skill in the art to be familiar with the teaching of arts analogous to his field of endeavor. Thus, the examiner maintains that Hodson and Benjamin et al do provide motivation to make the proposed combination of the references as stated by the examiner. The applicants can not ignore the teachings of Hodson and Benjamin merely because they teach features that differ from the Lee patents. Again applicant has cited no case law to support the similar argument, page 21, lines 10-18, of the prior response that the fact that one technology may be less desirable than another renders "as a matter of law" the teachings thereof uncombinable. The examiner notes that the alleged "contrary teachings" of Hodson and Benjamin would not prevent one of ordinary skill in the art interested in modifying Lee et al to enable it to be use in video and other applications requiring a fast refresh rate from noting the significance of the Hodson and Benjamin references to the problem of slow refresh rates in Lee et al.

10. As to the argument that there is no guidance in the combined references as to which elements should be combined to arrived at the claimed invention, the examiner points out that it would be clearly desirable to increase the refresh rate of the Lee et al patents to allow their use in video applications which Benjamin notes was previously not possible with a display of appreciable size. That is all the guidance needed to enable one of ordinary skill in the art to successfully combined the teachings of the references.

11. Note has been made of applicants request for a telephonic interview if this action is other than an allowance, however there does not appear to be any matter that could be readily resolved by a telephone conference at this time.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Directions for Responses

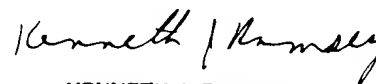
Any formal response to this communication should be directed to examiner Kenneth Ramsey, Art Unit 2879, and either

faxed to: 703-872-9319;

or mailed to: Box AF
Assistant Commissioner For Patents
Washington, D.C. 20231

Technical inquiries concerning this communication should be directed to Kenneth J. Ramsey, (703) 308-2324 (voice), (703) 746-4832 (fax).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


KENNETH J. RAMSEY
PRIMARY EXAMINER